

## COLD FOOD ONLY DAY

- Grade Level: 7-8
- Subjects: Science, Social Studies
- Suggested Time: 1-2 class periods, plus the Cold Food Only Day



*Plan a "Cold Food Only" day. Bring to focus the amount of energy consumed in preparing food.*

### Materials

Chalkboard or whiteboard, Cold Food Only Day Worksheet, calculators (optional), pencils, posterboard and crayons or markers.

### National Standards

#### Math:

- Compute fluently and make reasonable estimates.
- Understand patterns, relations, and functions.
- Use mathematical models to represent and understand quantitative relationships.
- Understand measurable attributes of objects and the units, systems, and processes of measurement.
- Represent and analyze mathematical situations and structures using algebraic symbols.
- Formulate questions that can be addressed with data and collect, organize, and display relevant data to answer them.
- Problem solving.
- Connections.

#### Social Studies:

- Marginal cost/benefit.
- Scarcity.
- Roles of the citizen.
- Environment and society.

### Ohio 2010 Standards

#### Math:

- Solve multi-step real-life and mathematical problems posed with positive and negative rational numbers in any form (whole numbers, fractions, and decimals), using tools strategically. Apply properties of operations to calculate with numbers in any form; convert between forms as appropriate; and assess the reasonableness of answers using mental computation and estimation strategies. (7)

- Use variables to represent quantities in a real-world or mathematical problem, and construct simple equations and inequalities to solve problems by reasoning about the quantities. (7)
- Solve linear equations in one variable. (8)
- Construct a function to model a linear relationship between two quantities. Determine the rate of change and initial value of the function from a description of a relationship or from two  $(x, y)$  values, including reading these from a table or from a graph. Interpret the rate of change and initial value of a linear function in terms of the situation it models, and in terms of its graph or a table of values. (8)

**Social Studies:**

- Individuals, governments, and businesses must analyze costs and benefits when making economic decisions. (7)
- Choices made by individuals, businesses and governments have both present and future consequences. (8)

**Objectives**

The student will be able to:

- Identify the most cost effective ways to prepare food.
- Calculate the cost of preparing food different ways using units of time, energy & money.
- Create a cold food only menu.
- Plan and advertise a school-wide Cold Food Only Day.

**Teacher Preparation**

Gain support from the building principal and kitchen staff to hold a Cold Food Only Day.

Variations: For 8th grade, use the equation to write and graph a function representing the relationship between energy and cost.

**Introduction**

- Ask students to guess which room of the house uses the most energy (kitchen).
- Ask students to name their favorite meals and identify all the ways energy is used to prepare these foods.
- Ask students how they could conserve energy during food preparation.
- Inform students that they will be creating a menu for a Cold Food Only Day for the whole school.

**Activities**

- Ask students why it is important to save energy in the kitchen. Review where energy comes from and how this impacts the environment.
- Distribute the Cold Food Only Day Worksheet. Explain the table and ask students to answer 1-4.

- Discuss why one might prepare foods in a particular way, even if it costs more.
- Discuss why large commercial ovens at school use more energy than the types listed in the table.
- Individually or in small groups, ask students to brainstorm cold foods from every food group. (Explain or review the food groups if necessary.)
- As a class, list on the board some cold food ideas from each food group. Then take a vote to choose 2 from each category to create the cold food menu.
- Explain that you will submit the menu to the kitchen staff and they will choose between the different menus each class created.
- Break students into groups to create Cold Food Only Day posters to inform others about the day. Include the date and how cold food saves energy.

### Extensions

- Students may research other ways to save in the kitchen such as water use, hot water use, and use of other kitchen appliances.
- The teacher may contact a local newspaper or news station and invite them to cover the Cold Food Only Day.
- Students may create a plan for saving energy in the kitchen at home and present it to their families. They may hold a Cold Food Only Day or Meal at home.

### Closing

- After reviewing the lesson, ask students to think of ways to save energy when storing cold foods in the refrigerator (such as closing the door quickly, getting all items out at once, returning all items at once, and keeping the refrigerator full versus empty).
- Congratulate students on the success of Cold Food Only Day.

### Worksheet

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**Cold Food Only Day Worksheet**



Cold Food Only  
Day Worksheet